NOTES FROM THE BOTANIC GARDENS, SYDNEY.

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Scirpus supinus L.

Centennial Park (A. A. Hamilton, 2, 1916.)—a new habitat for a species apparently rare in this State. The only specific locality recorded for this plant in New South Wales is Nepean River (Coll. R.Br.).* Australian forms of this species are represented in the National Herbarium, Sydney, by specimens from the British Museum under *Isolepis supina* R.Br. (Coll. Banks and Solander, New Holland, 1770) and Lake Albert, Victoria, a locality given by Bentham, *loc. cit.* There is also an example without collector's name, locality, or date. The specimens now recorded agree with those collected by Banks and Solander in all the important characters, differing only in the length of the involucral bract, which does not exceed the measurement (2 inches) given by Bentham. In some of the Banks-Solander specimens—which were probably collected at the Endeavour River—it attains a length of 15 cm. The Victorian specimens are diminutive, 6—8 cm. high, with slightly flexuose stems. An examination of the exotic herbarium material disclosed considerable variation in the length of the involucral bract. It appears to be an exceptionally variable species, as, according to the descriptions given in the works consulted, it is found to vary greatly in such important characters as the shape of the fruits, number of style branches, and the presence or absence of rudimentary sepals or petals; and is usually quoted as an exception in the section in which it has, for convenience, been placed. Examples with biconvex fruits and 2-style branches, and others with triangular fruits and 3-style branches were noted throughout the series. In several European specimens the lamina of the leaf sheath is occasionally produced to a length of 3—5 cm.

Schoenus Moorei Benth.

Moore and Betche† placed *S. Moorei* systematically in a group with smooth fruits. This is misleading, as an examination of the fruits throughout a series of specimens from various localities shows them to be prominently transversely rugose. The character of smooth as opposed to rugose or tuberculate fruits is an important factor in the determination of members of this genus, but in this particular species Bentham‡ has omitted to mention this feature, though he refers to both the shape and ribbing of the fruit.

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*Fl. Austr., vii., 1878, 330.

†Hdbook Fl. N.S.Wales, 1893, p.458.

‡*L.c.*, p.367.

LEPIDOSPERMA QUADRANGULATA, n.sp.

South Brothers, John's River (J. L. Boorman, 6, 1915); Port Macquarie (J. L. Boorman, 11, 1915).

Stipes 1 m. altus, 2 mm. latus, foliis latioribus, 75 cm. longis, stipes foliaque eodum modo quadrangulata. Panicula 2 ad 5 cm. longa. Bractea paniculae inferior 1—5 ad 3 cm. longa. Nux obovoidea triangularis, costis prominentibus Squamae angustae setaceae.

Stem about 1 m. high, under 2 mm. broad, finely striate, smooth, 4-angled, the edges slightly produced and rounded. Leaves 4-angled, broader and flatter than the stem, from 50 to 75 cm. long, the rounded edges of the angles prominent, forming a shallow channel more conspicuous on the broad side of the leaf. Panicle from 2 to 5 cm. long, compound, dense, ovoid-oblong to pyramidal, branches few, erect. Bracts of the inflorescence striate, the lowest 1½ to above 3 cm. long, the lamina occupying about half its length, the upper ones gradually smaller. Spikelets clustered, sessile, crowded on the panicle branches, 5—6 mm. long. Barren flowers 1—2 below the perfect one. Flowering glumes acuminate, 3—4 outer ones shorter and broader. Nut obovoid, 3-angled, the ribs prominent, pale when young, but gradually becoming mottled with brown. Hypogynous scales narrow, frequently tapering into a seta.

Its nearest affinity is *L. Neesii* Kunth., from which it is easily separated by the quadrangular leaves and stem, though in some forms of *L. Neesii* the stems show a degree of angularity. Quadrangular stems and leaves are represented in the genus by *L. tetraquetrum* Nees, an exceptional species placed by Bentham* in his otherwise flat-leaved series *Floribundae*, a position to which it is entitled by its inflorescence, an elongated panicle of 6—12 inches. The much reduced compact panicle of *L. quadrangulata* is that of Bentham's series *Tereticaules*, though it differs in the shape of stem and leaf from the other members of the group, which have—as the series distinction indicates—cylindrical stems and leaves.

GREVILLEA PUNICEA R.Br. var. CRASSIFOLIA, n.var.

Gosford (J. Purser, 9, 1899); Penang Ranges, Gosford (J. H. Maiden, 6, 1903); Road to Wiseman's Ferry, Gosford (A. A. Hamilton, 1, 1916).

Leaves crass, rigid, flattened, from ovate to rotundate, ½ to 2 cm. long, the intramarginal vein prominent and slightly tuberculate. A variety differing from the typical Port Jackson form in the size and rotundity of the leaves, and the conspicuous intra-marginal vein which gives the reflexed leaf margin a spreading rather than the typical recurved habit. This variety appears to be confined to the neighbourhood of Gosford.

HAKEA SALIGNA R.Br. var. ANGUSTIFOLIA, n.var.

Woronora River, Heathcote (A. A. Hamilton, 10, 1915). Growing among boulders in the river bed.

A compact shrub 2 m. high. Leaves narrow, ½ to 1 dec. long, 3—5 mm. broad, rigid, almost veinless. Fruit carpels small, 2 cm. long, 1—1¼ cm. broad, nearly smooth, the beak straight or barely produced, approaching the fruit of *H. microcarpa* R.Br. An example from Lawson (A. A. Hamilton, 9, 1914) of

*Fl. Austr., vii., p.385.

H. saligna, a spreading tree 6 m. high, has leaves from ½ to 1½ dec. long and 1 to nearly 3 cm. broad, distinctly veined, and fruit carpels 3½ cm. long, 2 cm. broad, covered with large prominent tubercles, the beak recurved. Specimens in the National Herbarium forming connecting links are from Cockle and Cowan Creeks (W. F. Blakely, 3, 1915), "tall slender shrubs 15—20 ft." (Collector's note), with narrow acuminate leaves, the venation indistinct, and comparatively large, prominently tuberculate fruits; Nowra (J. L. Boorman, 1, 1915). "a small tree 12—14 feet" (Collector's note) with short acute leaves, midway in width between the Lawson and Heathcote specimens, and small fruits with an elongated beak, the tubercles less prominent than in the examples from Lawson. Bentham's description of *H. saligna** may be interpreted to include all the forms here reviewed, but the morphological differences between the typical specimens from Lawson, and those from Heathcote appear to be sufficiently pronounced to warrant a varietal distinction. The figure presented by Mr. Maiden† is probably the nearest approach to the type available.

Pultenaea ferruginea Rudge.

Trans. Linn. Soc., xi., 300, t. 23.

Rudge's species is upheld by De Candolle,‡ who quotes Sieber's n. 420, but is reduced to a variety (*latifolia*) of *P. villosa* Willd. by Bentham.§ The latter also mentions Sieber's n. 420. He bases his varietal distinction on the smaller, very pubescent leaves, from narrow cuneate to broadly obovate, together with the larger flowers of the variety. We have in the National Herbarium a series of specimens collected in the neighbourhood of Glenbrook, which agree with Rudge's figure, and conform to his description, viz., Lapstone Hill (J. H. Maiden and R. H. Cambage, 10, 1904); Glenbrook (W. F. Blakely, 10, 1913; A. A. Hamilton, 11, 1914); Blue Mountains, without specific locality (E. Betche, 12, 1882). *P. villosa* has a wide range and as a consequence shows considerable variation, but none of the numerous specimens in the National Herbarium collection which were examined approach, either in habit or foliage, the form under review. The pendulous branchlets and narrow concave leaves of the typical *P. villosa* are replaced by an erect branching habit and leaves—as in Rudge's figure—rotund, slightly emarginate, and much larger than those of *P. villosa typica.* The hairs on the leaves of the typical *P. villosa* are short, erect, and bulbous at the base, and the flowers entirely yellow. In *P. ferruginea* the leaf hairs are long, weak, and appressed, and the carina of the flower is rust-coloured. Rudge gives some prominence to certain dots (sub-lente punctata) on the leaves of his species, including details in the plate showing both surfaces of a leaf to demonstrate this character. These dots are also discernible in a greater or lesser degree throughout the series of specimens of *P. villosa* examined. It will be seen that we have a difference in the habit of the plant, size and shape of leaves, size and colour of flowers, and a distinct vestiture separating these plants. When, after the passing of a century, examples are found in the neighbourhood in which Sieber (upon whose n. 420 the species is founded) is known to have collected, which are the counterpart of those figured by Rudge, it would appear that the characterization is

*Fl. Austr., v., 512.
†For. Flora N.S.W., v., p.109, Pl.171.
‡Prod. Syst. Veg., ii., 111.
§Fl. Austr., ii., 134.

sufficiently stable to warrant the retention of the specific rank and nomenclature as proposed by him.

PROSTANTHERA DENSA, n.sp.

Cronulla (A. A. Hamilton, 9, 1911; E. Cheel, 7, 1918.)

Frutex compactus subarboribus florens 5—9 dec., altus. Folia sucida, breviter petiolata, cordata ad ovata-lanceolata, costa hirsuta prominente precursa, 5 mm. ad 1 cm. longa, apud extremitates ramorum crebra, nonnumquam fasciculata. Semina metallica ritentia. *P. marifolia* R.Br. affinis.

A compact erect undershrub 5—9 dec. high with terete hirsute branches. Leaves succulent, very shortly petiolate, from cordate to ovate-lanceolate with revolute margins, scabrous hispid above, somewhat paler underneath with a prominent hirsute midvein, 5 mm. to 1 cm. long, densely crowded at the tips of the branches, occasionally fasciculate. Flowers axillary on very short pedicels with linear hirsute bracts 3 mm. long, the floral leaves similar to those of the stem. Calyx hirsute, 5 mm. long, the lips entire and nearly equal. Corolla more than twice as long as the calyx, sprinkled on the outside with short hairs, the broad throat bearded inside with long white hairs. Anthers with one appendage about twice as long as the cell, the other short and adnate. Seeds with a metallic lustre

Its position in the genus is under Bentham's series *Convexae* following, in specific sequence *P. marifolia* R.Br., with which it is connected by a series of specimens from Helensburgh (A. A. Hamilton, 10, 1913) taken from a shrub of 9—12 dec. with an upright spreading habit. The typical *P. marifolia* of the Port Jackson district is a scrambling undershrub of 3—5 dec.

The plants were found growing in profusion on the ocean slope of the rocky headland (Hawkesbury Series) at Cronulla, and the crass foliage is doubtless a response to the halophytic conditions prevailing in this station, as plants growing in the vicinity of tidal waters frequently develop a succulent habit. The species is confined to a limited area between the ocean beach at Cronulla and the northern entrance to Port Hacking.

PROSTANTHERA RHOMBEA R.Br.

Port Macquarie (E. R. Brown, 2, 1897); Douglas Park (A. A. Hamilton, 12, 1915). Two new specific localities extending the range of this somewhat rare species. Previously recorded from the Blue Mountains and Illawarra.

PROSTANTHERA SAXICOLA R.Br. var. MONTANA, n.var.

Katoomba; Narrow Neck (A. A. Hamilton, 1, 1903). Larger in all its parts than the typical *P. saxicola,* the flowers and young shoots more thickly clothed with hairs, the setaceous bracts minute and only occasionally developed. This variety approaches a form of *P. Behriana* Schlecht, but differs from that species in the length of the calyx lips (longer in *P. Behriana*), the minutes bracts, and the bristly tomentum. (The bracts are conspicuous in *P. Behriana,* and the tomentum of a fine texture.) It is usually found in scattered patches on sheltered hillsides, on the higher elevations of the Blue Mountains. Specimens in the National Herbarium are from Mt. Victoria (R. T. Baker, 12, 1890); Blue Mountains (E. Betche, 12, 1902); Blackheath (J. H. Maiden, 1, 1904). A specimen from Milton, near top of Pigeon House, n. 775 (R. H. Cambage, 12, 1902) is also referred to this variety.

PROSTANTHERA DEBILIS F. v. M.

New for New South Wales. Recorded from the Grampian Mountains, Victoria.* Examples in the National Herbarium are from Gulgong (J. H. Maiden, 4, 1901), Warrumbungle Ranges (W. Forsyth, 10, 1901), Molong (J. L. Boorman, 11, 1906), Capertee (J. L. Boorman, 12, 1915). An interesting range for a species hitherto regarded as exclusively Victorian. The New South Wales forms of *P. debilis* approach very closely specimens in the National Herbarium from New England (the type locality) of *P. saxicola* R.Br. var. *major*, differing chiefly in the distant canaliculate leaves, and the dense hoary tomentum on the calyces and young shoots. The leaves of *P. saxicola* var. *major* are flat and crowded and the calyces and young shoots sparsely tomentose.

*Frag. Phyto. Austr., F.v.M., viii., 1874, p. 147.